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9TH CONGRESS

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## Renewal of learning places

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The improvement of the common spaces of the Public Schools

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### Synopsis

The research involves enhanced use of public school buildings and open spaces. Improvements to school spaces and renewal of learning places will be made through small, dedicated architectural projects. Regeneration projects will take schools' open and common spaces as their starting point. The modification process will examine the requirements of experimental teaching, evaluate the needs of the scholastic community and observe the specific physical condition of the school structures included in the research.

The research, with the collaboration of an inter-disciplinary team, aims to propose guidelines for a change to existing culture within public schools. We intend to promote processes whereby schools are opened to associations undertaking socially relevant programmes, such as parents' organizations and non-profit organizations. We aim to start processes for the re-use and regeneration of the many abandoned spaces inside schools. We wish to promote updated teaching systems using new innovative models. The main theme of this research is to give physical shape to the Community's sense of belonging to the school, and to re-define a reciprocal relationship between the school and all those who live in it.

A project of architecture which can give a recognizable identity to anonymous spaces. A project that aims to offer new future and achievable perspectives for improvement to locations where social criticalities, nihilism, exclusion, marginalization, and sometimes violence, seem to prevail. The care for spaces, gardens, trees, new play-grounds, canteens, atrium, will reconfigure weak areas as areas in which new shared values are shown. An essential aspect of the architectural project includes the revision of technical components related to shading/sunny spaces, healthiness, security and energy efficiency. The scholastic heritage is re-designed in a qualitative sense through a new process of signifying and regenerating the common spaces by minimal interventions, allowing to work step by step.

**Key words:** School, Common spaces, Human Sciences, Experimental teaching.

## 1. Enhancement of Public Schools

This research is part of a multidisciplinary project. Its main topic is the recognition of the value of public school buildings in Milan and in its metropolitan district<sup>1</sup>. This research is focused on the need for an integrated and structural intervention based on the opening of Public Schools to the social and cultural realities existing in the city. Some local administrations are involved in the project.

The project includes on-site actions under the supervision of multidisciplinary scientific coordinators who are going to monitor the different interventions. It is intended to be a useful tool for the school system, so that it responds to the transformation needs required by current times. This way the school can strengthen its educational mission fulfilling its role of a place dedicated to learning.



Figure 1. Key-words of the research.

## 2. Introducing the First Case-study. *Luigi Cadorna Pre-school and Primary School*

The first case-study is the Luigi Cadorna Pre-school and Primary School that was built in the 1930s. Its architecture shows the typical features of the schools built in the Fascist period. The Cadorna school is located near the San Siro-Milite Ignoto working-class housing district which was designed by Franco Albini, Renato Camus and Giancarlo Palanti. It was built between 1931 and 1951 by the IFACP/Aler Regional Agency.

The realization of the Cadorna school was fully compliant with the guidelines for new school buildings as set in the “Norme per la compilazione di

<sup>1</sup> The first section of the research ( 2017/2018) is called "PROJECT SCHOOL", which is promoted by AIDIA - Italian Association of Engineers and Architects of Milan: Project leader arch. L. Poletti in collaboration with Ing. M. G. Mulas - Dipartimento di Ingegneria Civile e Ambientale, Politecnico di Milano – and in collaboration with some others departments of Politecnico di Milano, Ing. M. Albini, Arch. P. Brandurini, Lighting Designer C. Carucci, Dr. D. Casciani, Ing. A. Consoli, Ing. B. Ferrari, Ing. M. C. Motta, Arch. I. Oberti, Ing. E. Plescia, Ing. T. Radici, Ing. S. Regina, Arch. F. Lanz, Arch. B. Coppetti.

The following section of the above research refers to the project called "A shared school: for a culture of happiness", Call for New Generations 2017, Scientific committee by Università Bicocca, Politecnico di Milano, Scuola di Coaching Umanistico, with two local association Cooperativa LaFucina and Associazione Ala.



progetti per l'edilizia scolastica"<sup>2</sup> dated 1925. According to this milestone regulation, the new buildings were to meet a number of spatial and hygienic requirements regarding gyms, changing rooms, the medical room, the library, top management and administrative offices, the teachers' lounge, the keeper's room, and rooms for teaching students with learning disabilities. The Cadorna school was also equipped with a swimming pool with changing rooms and spaces for cooking, food storage, preparation, distribution as well as its consumption in the canteen.

Currently some of these spaces have fallen into disuse, not only in the Cadorna School but in all the Milan-area public schools. Some of these spaces are in a state of abandonment. Today the reactivation of their original functions is very unlikely because of the general reduction of the public services offered to the citizens. As an example, the decision to centralise the activities of cooking and food preparation in a single infrastructure outside of the school buildings, has been the main reason for the abandonment of the large kitchens originally designed and realized within each public school. All the same applies to the pool. In the Cadorna school it is in disuse and obsolescence (at level – 2.40 metres).

The Cadorna School also presents further interesting specificity connected to the social context characterized by a marked ethnic heterogeneity, due to the proximity with the San Siro district. The percentage of foreign children is 65% on average. In some classrooms it reaches 90%. The main current nationalities related to their places of origin are Morocco, Egypt and Philippines<sup>3</sup>.

Cadorna School is a model of enhancing the heterogeneity since it is the first "open school" case in Milan. In fact it remains open during the afternoon and evening for language courses and for extra-curricular activities like music, cultural and sport courses. Laboratories, animated readings, films, games, exchange of used clothes are just some of the possible activities organized with the common aim to integrate the different ethnic groups. "Mothers at school" is a non-profit organization composed of volunteers that was created in order to give the chance to learn Italian to foreign mothers. In the meantime, their children are looked after by a baby-sitter.

In order to implement these activities and to respond to the need of regular educational spaces, the main problem emerged is the lack of spaces. The architectural project we are studying must respond to the demand of new classrooms for the literacy of newcomers, while avoiding the overcrowding of the existing spaces. In addition, the architectural project should respond to the necessity of dedicated educational spaces for children with critical family situations or requiring psychological support.

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<sup>2</sup> My translation "Regulations for the drawing-up of school buildings projects "

<sup>3</sup> The newspapers marks the social dynamics and open questions in public schools: Corriere della Sera "Da 'scuola ghetto' a modello di integrazione" 2013, November, 7th / Corriere della Sera, "Milano, le scuole sovraffollate chiudono agli studenti stranieri" 2017, December 18th

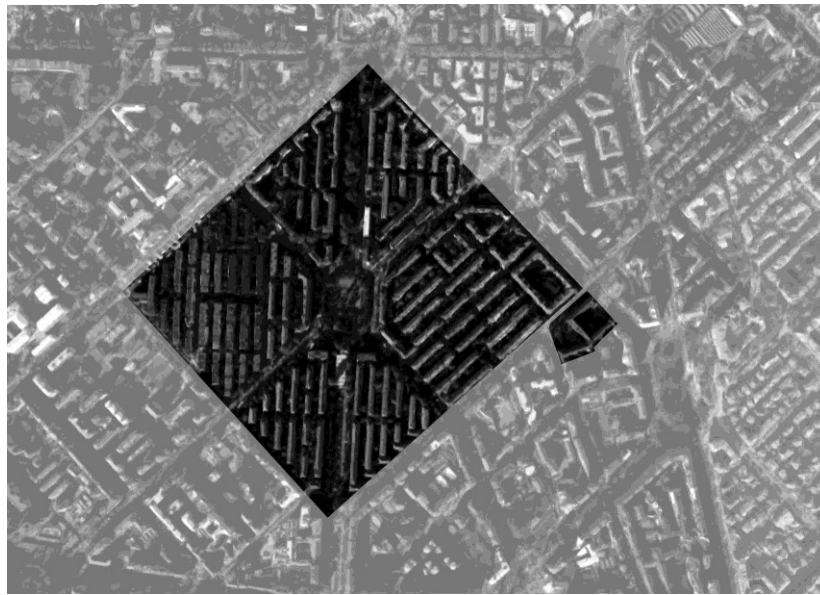


Figure 2. San Siro Milite Ignoto district and Cadorna School in the East.

### 3. The project

The existing spaces have to be redesigned to meet the new needs, in such a way that the goal of integration is effective, visible and concrete. The project has as its main objective the regeneration of all school common areas in which the community can recognize itself. These include the former canteen, the courtyard, the garden, and the hall for parties. The project is shared with current users through questionnaires and interviews to students and administrative staff<sup>4</sup>.

The first step of the pilot project focuses and redesigns the open spaces of the courtyard in front (entrance of the school), the small green area and the garden at the back where there are service spaces like loading and unloading areas, parking lots and areas for waste management.

In the courtyard and the garden it is necessary to redesign the common grounds, the areas dedicated to outdoor activities and new playgrounds. The overall project works on articulations of the soil in order to connect different levels (-2.40 metres, +1.40 metres, zero level) through the opening of direct connections between semi-hypogean floor (-2.40 metres) and the garden (zero level).

In conclusion, this project gives value to the existing buildings and related open spaces, in order to regain spaces at -2.40 level, that have fallen in disuse. The idea at the basis of the project is to realize new laboratories and a new canteen overlooking the garden and allowing to work/eat outdoors in the summer and spring. The program envisages tables and chairs under the trees where it is possible to have classes, while in an another enclosed area children can safely play instead of finding themselves in asphalted grounds. A complex

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<sup>4</sup> The first visit and survey in the Cadorna School was on 14<sup>th</sup> November, 2017; the most important meeting with the project team, the School Management and the representative parents was on the 5<sup>th</sup> December, 2017; the general check of the project and contribution was on 21<sup>st</sup> March 2018, the project is going on looking for the public meeting on October 2018.

project that focuses on the courtyard and the garden going through the canteen. These two open spaces are meant as two different public areas where the heterogeneous and multi-ethnic school community can find the necessary stimulus for mutual sharing and respect. The core of the architectural and social change is the break and recreational time. This is a new perspective that overturns the conventional approach that is focused mainly on classroom-taught lessons.

From the methodological point of view, surveys and data collections about the use and the state of the art of these area were carried out. The project program was discussed in detail during meetings and interviews with the headmaster of the Institute and the school staff, and also included questionnaires addressed to children and drawings made by the little ones. This research is shared with all the people who daily attends and use the Cadorna School. The project aims to deal with their concrete needs, offering them different solutions through light interventions using colours, new materials and the control of natural and artificial light. Finally, our ambitious purpose is to spread this research and the guide-lines of the project to all Public Schools with similar features located in the metropolitan area in Milan.

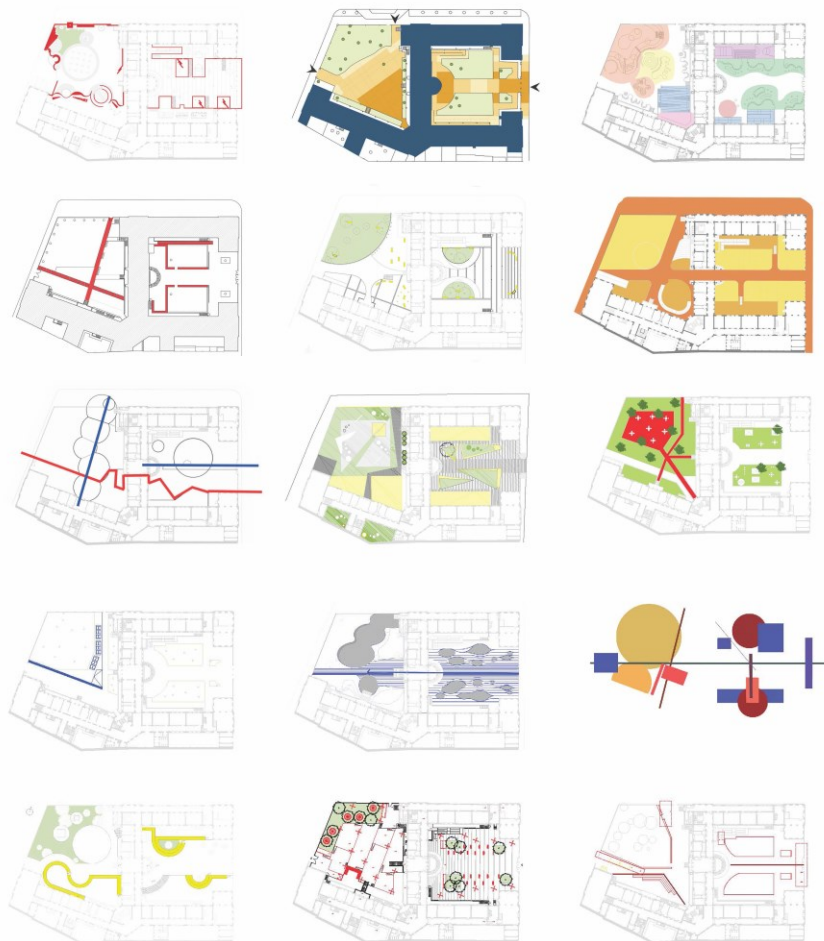


Figure 3. Possible landscape scenarios as a research contribution: design strategies for the open spaces of the Cadorna School, elaborated by the students of Architectural Design Workshop 2, prof. B.Coppetti, M. Aimini, R. Brumana, a.a 2017/2018.

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## Biography

**Barbara Coppetti.** PhD Architect. She is Assistant Professor in Architecture and Urban Design at the Department of Architecture and Urban Studies at the Polytechnic of Milan, Professor at Laboratory of Architectural Design 2.

She develops her research on the project of open spaces, public space and public buildings with specific attention to architecture of the soil. She coordinated the three years program "Re-forming Milan. Design experiments for neglected and decayed spaces and building". She is scientific director of the "Industry in the park - Architecture Energy Landscape", a research program commissioned by the private holding Terni Research. She is member of the research group involved in the Ministry funded, PRIN research Re-Cycle Italy on the regeneration of industrials and marginal areas. She has worked as a professional consulting for the City of Milan at the Sector Strategic Projects contributing to the planning and design of complex areas of urban regeneration..